CLAIM AMENDMENTS

Please amend Claim 1 as follows:

1. (currently amended) A nanodiamond article, comprising a mass of sintered nanodiamond particles, said mass ~~consisting essentially of carbon, wherein~~ being greater than about 98% by volume of ~~said mass is~~ nanodiamond or non-diamond carbon ~~and~~ with greater than about 95% by volume ~~of said mass is~~ in the form of nanodiamond, and wherein said mass is free of residual catalyst ~~substantially free of non-carbon constituents~~.

2. (previously presented) The nanodiamond article of claim 1, wherein said nanodiamond particles are self-sintered.

3. (previously presented) The nanodiamond article of claim 1, said mass further comprising in situ grown nanocrystalline diamond.

4. (previously presented) The nanodiamond article of claim 3, wherein the in situ grown nanocrystalline diamond is grown from a fullerene carbon source.

5. (previously presented) The nanodiamond article of claim 1, wherein said mass consists of carbon.

6. (previously presented) The nanodiamond article of claim 1, wherein the nanodiamond particles have an average diameter of from about 1 nm to about 500 μm.

7. (previously presented) The nanodiamond article of claim 6, wherein the nanodiamond particles have an average diameter of from about 1 nm to about 100 nm.

8. (previously presented) The nanodiamond article of claim 7, wherein the nanodiamond particles have an average diameter of from about 2 nm to about 30 nm.

9. (previously presented) The nanodiamond article of claim 1, wherein the nanodiamond particles have an average crystal size of from about 1 nm to about 20 nm.

10. (previously presented) The nanodiamond article of claim 1, wherein the nanodiamond particles are randomly oriented.

11. (previously presented) The nanodiamond article of claim 1, further comprising a substrate attached to the mass of sintered nanodiamond particles.

12. (previously presented) The nanodiamond article of claim 11, wherein the substrate comprises a layer of at least micron-sized diamond particles bonded together by a metal binder, and a support layer bonded to the layer of at least micron-sized diamond particles.

13. (previously presented) The nanodiamond article of claim 12, wherein the at least micron-sized diamond particles have an average particle size of from about 0.1 μm to about 100 μm.

14. (previously presented) The nanodiamond article of claim 12, wherein the metal binder comprises a member selected from the group consisting of nickel, iron, cobalt, manganese, and mixtures or alloys thereof.

15. (previously presented) The nanodiamond article of claim 11, wherein the substrate comprises a member selected from the group consisting of tungsten, titanium, cemented tungsten carbide, cermets, ceramics, and composites or alloys thereof.

16. (previously presented) The nanodiamond article of claim 1, wherein said nanodiamond article is stable at temperatures up to from about 700 °C to about 1,000 °C.

17. (previously presented) The nanodiamond article of claim 1, wherein said nanodiamond article is a member selected from the group consisting of cutting tools, drill bits, and wire drawing dies.

18.-20. (canceled)

21. (withdrawn) A method of forming a nanodiamond tool, comprising steps of:

(a) assembling a mass of nanodiamond particles; and

(b) sintering the mass of nanodiamond particles to form a sintered mass, said sintered mass consisting essentially of carbon, wherein greater than about 98% by volume of said mass is carbon and greater than about 95% by volume of said mass is in the form of nanodiamond, and is substantially free of non-carbon constituents.

22. (withdrawn) The method of claim 21, wherein said mass of nanodiamond particles consists essentially of nanodiamond particles up to the step of sintering, such that the sintered mass is self-sintered.

23. (withdrawn) The method of claim 21, wherein the step of assembling a mass of nanodiamond particles further comprises mixing a fullerene carbon source with the nanodiamond particles.

24. (withdrawn) The method of claim 21, wherein said sintered mass contains greater than about 99% by volume nanodiamond particles.

25. (withdrawn) The method of claim 21, wherein said sintered mass consists of carbon.

26. (withdrawn) The method of claim 21, further comprising the step of disposing a first layer of at least micron-sized diamond adjacent the mass of nanodiamond particles prior to sintering.

27. (withdrawn) The method of claim 26, wherein the layer of at least micron-sized diamond further comprises a metal binder.

28. (withdrawn) The method of claim 27, wherein the metal binder comprises a member selected from the group consisting of nickel, iron, cobalt, manganese, and mixtures and allows thereof.

29. (withdrawn) The method of claim 26, further comprising the step of including a first support material adjacent to the layer of at least micron-sized diamond prior to the step of sintering.

30. (withdrawn) The method of claim 29, wherein the first support material comprises a member selected from the group consisting of tungsten, titanium, cemented tungsten carbide, cermets, ceramics, and composites of alloys thereof.